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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,305

12/17/2004

Yuki Katsura

123753

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25944

7590

05/17/2007

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

DO, ROBERT C

ART UNIT

PAPER NUMBER

2851

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DELIVERY MODE

05/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/518,305	KATSURA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Robert C. Do	2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 12, 13 and 19-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10, 11 and 14-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/17/04</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species II in the reply filed on 2/20/2007 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application could be conducted without undue burden on the examiner. This is not found persuasive because the different species showing different shapes of the light absorbing parts is a burden on the examiner because it would require searching in different areas in which the other shapes do not occur.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-9, 12, 13, and 19-41 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 02/20/2007.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10, 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Moshrefzadeh et al. (US 6,417,966).

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5. Regarding Claim 10, Moshrefzadeh et al. discloses a diffusion sheet (Fig. 10, 1000 is a dispersing layer) that diffuses light incident thereon from a light incident side and causes the light to outgo from a light outgoing side, characterized by comprising: a plurality of approximately trapezoidal columnar unit lens portions (the area between the light absorbing parts of 1004) disposed such that long-axis directions thereof are in parallel with each other (Fig. 10 shows sides of the light absorbing parts parallel to each other), wherein all surfaces of the unit lens portions (area between the light absorbing parts 1004), which correspond to long bottom segments of approximately trapezoidal sections of the unit lens portions (area between the light absorbing parts 1004) vertical to the long-axis directions thereof, are disposed on a light-incident-side flat surface (the long bottom segments of the areas between the light absorbing parts 1004 are disposed on a light incident side flat surface); and a plurality of light absorbing portions (1004) interposed between adjacent unit lens portions (area between the light absorbing parts 1004) of the plurality of unit lens portions to absorb external light incident from the light outgoing side, wherein the plurality of unit lens portions (area between the light absorbing parts 1004) are arranged such that a part of the light incident on the unit lens portions (area between the light absorbing parts 1004) from the light incident side is totally reflected on surfaces of the unit lens portions (see the light in Fig. 10 reflected off the surfaces of the unit lens portions) corresponding to side segments (sides of 1004) of the approximately trapezoidal sections vertical to the long-axis directions of the unit lens portions (area between the light absorbing parts 1004), and a section of each of the unit lens portions vertical to the long-axis direction thereof is formed in an isosceles

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trapezoidal shape (the first and last complete unit lenses in Fig. 10 are isosceles trapezoidal shape), and the plurality of unit lens portions (area between the light absorbing parts 1004) have at least two types of unit lens portions (the first and last complete unit lenses are each different lengths along the long sides) each having a different angle between each side segment and a light-incident-side long bottom segment of the isosceles trapezoidal section. (Since the sides on the last unit lens of Fig. 10 is longer than the first one, the angles at which the sides are at are different)

6. Regarding Claim 11, Moshrefzadeh et al. discloses a diffusion sheet (1000), characterized in that a length of a light-outgoing-side bottom segment of a section of each of the light absorbing portions vertical to a long-axis direction thereof is 40% or more to 100% or less of a length of the light-incident-side long bottom segment of the section of each of the unit lens portions vertical to the long-axis direction thereof. (Fig. 10 shows the length on the light absorbing part 1004 at the light outgoing side, next to the far right complete unit lens portion being 40% to 100% of a length of the light incident side long bottom segment of the unit lens portion.)

7. Regarding Claim 17, Moshrefzadeh et al. discloses characterized in that the unit lens portions comprise a radiation setting resin. (Column 11, describe the unit lens portions 506 in Fig. 5A are made up of a UV curable resin)

8. Regarding Claim 18, Moshrefzadeh et al. discloses a Fresnel lens sheet (Fig. 10, 1022) disposed on the light incident side of the diffusion sheet. (Fresnel lens is on the light incident side, see light path in Fig. 10)

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshrefzadeh et al. in view of Browning (US 2002/0191283).

11. Regarding Claim 14, Moshrefzadeh et al. discloses characterized by further comprising a support plate (Fig. 10, 1002) disposed on the light outgoing side of the unit lens portions.

Moshrefzadeh et al. does not disclose the support plate containing a diffusion agent.

However, Browning discloses a support plate (Fig. 1, 16) disposed on the light outgoing side of the unit lens portions containing a diffusion agent. (Also see paragraph [0018] describing the layer filled with diffusion particles)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add diffusion particles of Browning into the support plate of Moshrefzadeh et al. for the purpose of diffusing light from the projector to allow an even light distribution to be seen by the viewer.

Regarding Claim 15, Moshrefzadeh et al. discloses characterized in that a light-outgoing-side surface of the support plate is formed flat. (Fig. 10, support plate 1002 is flat)

12. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshrefzadeh et al. and Browning in view of Nakagawa et al. (US 2002/0126377)

13. Regarding Claim 16, Moshrefzadeh et al. and Browning's teaching have been discussed above.

Moshrefzadeh et al. and Browning do not disclose characterized in that the support plate has an ultraviolet ray absorbing action.

However Miyahara et al. discloses characterized in that the support plate (Fig. 2, 6) has an ultraviolet ray absorbing action (microspheres 14 provide ultraviolet ray absorbing action, see paragraph [0157])

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the microspheres of Nakagawa et al. into the diffusion support of Browning for the purpose of providing the optical diffusion layer with a large viewing area and less unevenness of brightness distribution. (Nakagawa et al. US 2002/0126377)

Regarding Claim 18, Moshrefzadeh et al. discloses a Fresnel lens sheet (Fig. 10, 1022) disposed on the light incident side of the diffusion sheet. (Fresnel lens is on the light incident side, see light path in Fig. 10)

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Do whose telephone number is (571)272-1387. The examiner can normally be reached on Monday Through Friday, 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571)272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RCD

Rodney Fuller  
Primary Examiner

